

## INFORMATION REPORT INFORMATION REPORT

## CENTRAL INTELLIGENCE AGENCY

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COUNTRY USSR (Ukrainian SSR)

REPORT

SUBJECT Industrial Plants and Cities  
in the Ukrainian SSR

DATE DISTR. 17 August 1960

NO. PAGES 2

(M) 50X1-HUM

REQUIREMENT  
NO.

REFERENCES

DATE  
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SOURCE EVALUATIONS ARE DEFINITIVE. APPRAISAL OF CONTENT IS TENTATIVE.

Military Installations in Krivoy Rog

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- There was no headquarters for any specific military branch. General military headquarters was located on a street [redacted] about 400 or 500 meters south of the collective farm market, in a one-story red-brick building about 30 meters long. There were about six infantry officers and one naval officer [redacted] who took care of transients. There were no barracks on the left bank of the river. The infantrymen that garrisoned the city must have had barracks on the river's right bank [redacted] a few air force personnel [redacted]. There were no military plants in the city. [redacted]
- An airfield was located on a great, unimproved, natural, flat steppe about two or three kilometers east of the city's outskirts. It was completely unguarded and was used by the planes on the Krivoy Rog - Dnepropetrovsk run. It had a small, one-story stone building that had a wind sock. There was no other instrumentation nor radar outside. The field was not fenced and [redacted] it had no signal lights. From 1951 on [redacted] delta-wing jet planes fly over Krovoy Rog at a [redacted]

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STATE	X	ARMY	#	X	NAVY	X	AIR	15	FBI		AEC		NSA	X	NIC	X
(Note: Washington distribution indicated by "X"; Field distribution by "#")																

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minimum altitude of about 2,000 meters.<sup>1</sup> They usually came from the west and flew towards the east, returning towards the same direction. They either flew singly or in a group of three. They almost always exceeded the speed of sound because the sound was heard after the plane had passed. Except in bad weather, these planes were seen passing every day during the entire year. They kept flying in the same direction

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also twin-engine dark grey Douglas aircraft, each towing two gliders, fly over the city in an east-west direction. The gliders were separated from the tow planes by about 25 or 30 meters. they flew at a height of about 800 meters. They almost always flew singly but sometimes groups of three. never any in bad weather. they transported 18 persons because in late summer 1954, one of the gliders had crashed when the tow cable came loose and all 18 soldiers had died. they were training flights from some aviation school which was not far away because of the frequency with which the gliders passed over the city. The city had no naval or naval-air bases.

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3. there must have been a military school or academy on the right bank of the Ingulets River groups of students, although they might have been from the outskirts of town. They wore khaki uniforms with straight trousers and sky-blue pogoni that had golden wings on their upper surface. On the left lapel of the jacket, they wore a dark blue rhombus containing an open white parachute. The upper part of the parachute bore a red star. they were always in groups of two or three. There were no experimental centers, shooting ranges, or testing ranges on the outskirts of the city.

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4. The following reports on the Ukrainian SSR

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Attachment 1: A seven-page report on Krivoy Rog with an overlay to O250-9999-100, 1:100,000, locating coal mines in this area. The report discusses new urban developments, public and industrial facilities, transportation, and a mining laboratory.

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Attachment 2: A four-page report on the Izyum Optical Plant in Kharkov, with drawings of the MK-11 (sic) and M-11 prisms. Restricted Shop No. 16, and various types of prisms and glass objects that were manufactured by the plant are mentioned in general terms.

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Attachment 3: A seven-page report on the State Light Bulb Plant in Ivov with a sketch of the plant area. Plant production, labor force, working conditions, administration, security, and miscellaneous information are described.

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Attachment 4: A three-page report on the Petrovskiy Metallurgical Plant in Dnepropetrovsk. Embezzlement, production, production deficiencies, and personalities are discussed.

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Attachment 5: A 24-point legend to an overlay to the city of Dneprodzerzhinsk, approximate scale 1:25,000.

1. Comment: USSR delta-winged aircraft were observed at Tushino no earlier than 1956.

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## CITY AND MINING AREA OF KRIVOY ROG

## OBSERVATION OF DELTA-WINGED JET AIRCRAFT

New Urban Developments

1. Dikovka poselok, construction of which began about 1950 and was still continuing in 1956, was located about four kilometers northeast of the center of Krivoy Rog. New buildings were brick and had two, three, four, or five stories. These buildings were erected exclusively for employees of the Kirov mine by an enterprise called Fifth Construction which belonged to the construction trust of Krivoy Rog. Dzerzhinskiy poselok was located about five kilometers northeast of the city's center and consisted principally of three, four, five, and six-story brick buildings exclusively for workers at the Dzerzhinskiy mine.

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Poselok Libknekhta, located about eight kilometers north of the city, consisted principally of new two, three, four and five-story brick buildings occupied by employees of the Karl Libknekht mine.

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New structures which appeared to be residential were visible about five kilometers west of the city.

2. Old street names had not been changed. Even numbers were on the right side and odd numbers on the left. No streets were being widened and no buildings were being torn down.

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Social Institutions

3. the city jail was located probably on the right bank of the Ingulets River. The okrug hospital for the inhabitants of Krivoy Rog was located in Dzerzhinskiy poselok. The Dzerzhinskiy hospital, which was also located here, was for the exclusive use of patients from that poselok. Each poselok had a hospital for its inhabitants. the city hospital was located on ulitsa Engelsa; This hospital handled cases of serious illness and accidents that could not be cared for in the other hospitals and took care of the city's inhabitants generally.

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Hotels and Collective Housing

4. The city's only hotel was a five-story brick structure located at about the center of ulitsa Karla Marksa. collective housing of the Geological Institute of Mining Engineers which was on ulitsa Engelsa.

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Business and Public Buildings

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5. The mine trust for the rayon and the city was located on ulitsa Lenina in a five-story brick building

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there were no other ministerial representatives. The city's Communist Party Committee was located on ulitsa Lenina in a three or four-story brick building

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The evening university of Marxism-Leninism was located on ulitsa Engelsa in the same building as the Geological Institute for Mining Engineers. There were no foreign diplomatic representatives in the city.

6. the city's only market was that of the workers' collective farms (kolkhoznnyy rynok), located in the open in a large square about 700 meters from the center of ulitsa Karla Marksa.

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Research

7. Each mining enterprise had its own laboratory. That of the Kirov mine was located about 1,500 meters west of Dikovka poselok and about four kilometers northeast of the city's center. the city had no other scientific research centers.

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Transportation Facilities

8. Highways connected Krivoy Rog with the following places:

- a. Dnepropetrovsk. This highway was located to the northeast of the city, was six or seven meters wide, paved with asphalt, cobblestones, and stone, and was in very bad condition. It had practically no curves and had kilometer markers. It was unguarded but but motorized traffic policemen patrolled it.
- b. Kirovograd. This was a dirt road located northwest of the city, about six or seven meters wide, and in very bad condition. Its few curves were very gentle. It had kilometer markers and was patrolled by motorized highway police.
- c. Mines. This highway was located to the north of the city and ran through the mining towns to Pyatikhatki. It was asphalt-topped, about six or seven meters wide, and was in excellent condition. Its few curves were gentle.

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It was patrolled by highway and urban police in each of the poselki through which it passed.

9. Railroad lines connected Krivoy Rog with Pyatikhatki and Dnepropetrovsk. Both lines had steam-driven trains, double tracks of standard gauge, and were used by both passenger and freight trains. There were other railroad lines

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The city's main station was located about three kilometers east of Dzerzhinskiy poselok.

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10. The city had only one streetcar line which began on ulitsa Lenina and ended in Dzerzhinskiy poselok, returning over the same route.

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The three city buslines, all unnumbered, began in ploshchad Lenina or nearby. All bore the names of their points of destination which were the poselki of Dikovka, Karl Libknekht and Oktyabrskoye. there was another busline that ran to nearby towns

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The city had no trolleybuses or urban railroads.

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11. A reinforced-concrete railroad bridge about 100 meters long and about nine meters wide crossed the Saksagan River, near the old Kirovskiy poselok. It had been completed about 1952 or 1953 and was guarded by one or two railroad troops at both entrance and exit. The city had no other new bridge and there were no viaducts, at least not on the left bank of the Ingulets River.

12. The city had no traffic signals. There were traffic policemen on such main streets as ulitsa Karla Marksa, ulitsa Lenina, and the one leading to the market.

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*am*Police Headquarters

16. The city police headquarters was located on ulitsa Lenina, about 150 meters southeast of ploschad Lenina, in a three-story brick building. All the poselki had a city police headquarters [redacted]

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That of Dikovka poselok was in a one-story brick building.

Industries

17. Except for the foundries located in the city, there was no industry and no plans to start any. [redacted] mines in the area (see overlay showing locations on page 7 ).

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- a. The Kirov mine was located about four kilometers northwest of the city center. [redacted] the drobilnaya sortirovochnaya fabrika (DSF) [redacted] belonged to the Kirov mine [redacted]

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[redacted] All of the mines in the area bore names rather than numbers. The Kirov mine had four shafts: the main shaft, called Kirov, and located about four kilometers northeast of the city center; the south shaft (Yuzhnaya Shakhta), connecting with the main shaft and located about one kilometer from it; the Karnavotka shaft, located about 1,400 meters southwest of the south shaft; and the north shaft (Severnaya Shakhta), located about 700 meters north of the main shaft, which became operative in late summer 1955.

- b. The Dzerzhinskiy mine was located about two kilometers south of the Kirov mine's south shaft. It had three shafts [redacted] located in a straight line, and the first and the third were about two kilometers apart.

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- c. Karl Libknekht mine was located about three kilometers northeast of the Kirov mine's north shaft. [redacted]

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- d. Roza Lyuksemburg mine was located about three kilometers slightly northeast of the Karl Libknekht mine. [redacted]

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- e. Oktyabrskaya Revolyutsiya mine was located about five kilometers slightly northeast of the Roza Lyuksemburg mine. [redacted]

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- f. Other mines, including the Lenin mine, were located northeast of the Oktyabrskaya Revolyutsiya mine. [redacted]

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18. There was constant drilling west of the north shaft of the Kirov mine and it was planned to open another mine in that area. Some shafts were located 500 meters from the north shaft and others about two kilometers away. [redacted]

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19. There were no oil pipelines in the area.

20. Houses in Dikovka had no gas. [redacted] All electricity consumed in the area was transmitted from the DneproGES. City water was piped from the Ingulets River

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[REDACTED]

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via underground pipes. There was no canal system. Neither homes nor stores in Dikovka had telephones; officials may have had them in their homes. [REDACTED] Krivoy Rog had telephones. [REDACTED]

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[REDACTED] The telegraph exchange and the post office were located on ulitsa Karla Marksa in what [REDACTED] was a two-story brick building. Kirovskiy poselok had a branch post office.

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[REDACTED]

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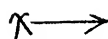
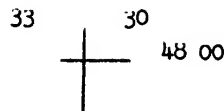
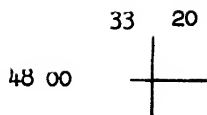
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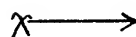
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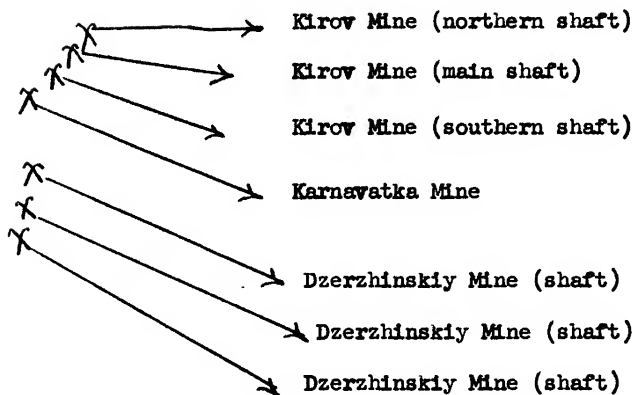
Oktyabrskoy Revolyutsiya Mine



Roza Lyuksemburg Mine



Karl Libknekht Mine



Overlay to Map of Krivoy Rog Area

Showing Coal Mines

Scale 1:100,000

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COUNTRY: USSR (Lvovskaya oblast)

REPORT

SUBJECT: State Light Bulb Plant  
in Lvov

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PLACE ACQUIRED:

DATE OF REPORT: 21 June 1960

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### STATE LIGHT BULB PLANT IN LVOV

1. The Gosudarstvennyy Lampovyy Zavod (State Light Bulb Plant) had not been known by any other name previously and had no numerical designation. It was formerly subordinate to the Ministry of Electrical Power Stations and Electrical Industry. The plant was located at the corner of Turgeneva and Selesnyaka streets (address: 78 Turgeneva street), Krasnoarmeyskiy rayon, in the southwestern section of Lvov, Lvovskaya oblast.

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#### Description

2. The plant territory occupied an area approximately 200 x 50 meters in size. Construction of the plant was terminated in 1956. [redacted] at the plant only one three-story building (a former schoolhouse) was in use. This building was augmented by the construction of five new plant buildings. The sides of the plant area bordering Turgeneva and Selesnyaka streets were lined with a stone wall approximately two and one-half meters high and 30 centimeters thick. The other sides were bordered by a 15-strand barbed wire fence supported by small iron fence posts approximately two-and-one-half meters high and five centimeters thick. The western section of the plant territory faced the countryside. From Turgeneva street there were five plant entrance gates, only one of which was a personnel entrance. (Refer to plant layout, page 8 .)

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3. [redacted] this plant was constructed by Soviet labor camp internees who had been imprisoned for small, unimportant crimes. [redacted] 50X1-HUM  
[redacted] 50X1-HUM
- [redacted] the Soviets were not in favor of undertaking new construction projects near the border.

Plant Production

4. The plant products were:

a. Light bulbs, with diameters from 55 to 95 millimeters, weighing approximately 40 grams, white transparent and translucent, in wattages from 25 to 500. On the lower side of the bulb was the plant trademark, a circle with the initials LSEZ-Lvovskiy Soyuzniy Electrolampovyy Zavod (Lvov Union Electric Light Bulb Plant). Inside this circle was another smaller circle with a number indicating the wattage. (Page 8 , figure 2.) There were no series numbers.

b. Radio tubes. [redacted]

c. Television tubes. [redacted]

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d. [redacted] in building No. 4, small automobile and airplane lights were manufactured in one, one-and-one-half, two and two-and-one-half watt sizes.

nor repair

[redacted] this plant did not manufacture/any type of military materiel.

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5. Approximately 50,000 light bulbs were manufactured daily which was the established norm. In case of necessity the plant was capable of producing 75,000 bulbs. [redacted] in time of war a small part of the plant could be converted to war production. 50X1-HUM

6. The mixture of the materials used in making glass was prepared in building number 7, then taken to the ovens in buildings number 8, 5, and 6. The mixture was heated to 1,400 degrees, and after having passed through this phase, the molten glass was a reddish white color. All control apparatus and machinery in the plant were automatic. The electrically operated plant machines were of German, Hungarian, and Czechoslovakian make. The machinery maintenance methods were out-dated but the machinery itself was considered excellent.

7. The light bulbs were individually packed in cardboard cartons and then in boxes of 50. On the outside of these boxes was a sketch of a bulb with the factory trade mark. Small three-ton trucks were used for transportation. The plant had six three-ton trucks, three one and one-half ton trucks, two tow trucks and two passenger cars, the latter for the use of the director and other personnel. Plant products were stored in the same building in which they were manufactured.

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Raw Materials

8. The following raw materials were brought to the plant: caustic soda, sand, charcoal, sulfuric acid, an acid of magnesium, sulfate, a yellow metal, and a white metal for filaments, wolfram, molybdenum, tin, lead, and barium. Natural gas was used in the plant and in case of gas failure there was a 10,000 liter gas-oil reserve tank. The wolfram and molybdenum were imported from Hungary. All raw materials arrived at the town railroad station and from there they were transported to the plant by truck. Shipments of raw materials (quantities unknown) arrived approximately every two months. For the production of glass, approximately 25 tons of raw materials were used daily, 70 per cent of which was sand, 16 percent caustic soda, eight percent barium, five percent an acid of magnesium and one percent charcoal.

Utilities

9. Water was supplied to the plant by underground pipes of the town water system. Electricity was also supplied from the town source. The supply system was adequate and of 280 volts.

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Labor Force and Working Conditions

10. There were approximately 3,000 workers in this plant of whom 75 percent were women. [redacted] 50 percent of the personnel were specialists. The plant operated on a six-day work week and there were three eight-hour work shifts. Approximately 1,200 workers were employed on each of the first two shifts, and 600 workers on the third shift. The average monthly salary was 600 rubles.
11. The plant operated on a Stakhanovite basis, but there was no overtime work. It was not difficult for the plant to maintain the average production norm. There were no strikes. (Anyone who participated in a strike faced a 25-year prison sentence.) There were no complaints. There were no special privileges for anyone. [redacted] if anyone had special privileges they would have been for the higher authorities and Party secretaries.
12. Absenteeism was prohibited except in case of sickness. There was a first aid station in building No. 2, with 10-12 beds, staffed by a doctor and a nurse on each shift.

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13. Organization and Personnel

The plant organization was headed by the plant director. Immediately subordinate to him were: the production and wage chief; the assistant director; the chief engineer; the personnel chief; the chief of procurement and sales; and also the Party chief. The production and wage chief supervised the cashier. The chief engineer supervised the chief chemist and the chief of plans, who directed the

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activities of the construction chief. The personnel chief was in charge of the workshop chiefs. Subordinate to the chief for procurement and sales were the OTK chief and the OTK workshop chiefs. The chief chemist supervised four workshop chemists and subordinate to each workshop chemist was a workshop technician. Each of these workshop technicians directed two workshop foremen who were individually assisted by 12-15 assistant foremen, who were each in charge of a section of 25 workers. The Party organization was as follows: the Party secretary directed the Party workshop secretaries who were responsible for the Party members in the workshops. The labor union chief was also subordinate to the Party secretary, and the workshop labor union representatives received instruction from the labor union chief. Also subordinate to the Party secretary were the Komsomol chief and all the members of this youth organization.

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14.

15.

Marchenko (fnu)

was the chief engineer.

16.

Badrov (fnu)

chief of personnel

Plant Security

17. The plant guards were stationed only within the plant territory. There were no sentry boxes. The guard service was also divided into three shifts. There were approximately 25 male guards subordinate to the plant, who were armed with what appeared to be surplus army rifles. A plant pass was needed to enter the plant territory. This pass which contained the bearer's photograph and was valid for one year, had to be shown to the guard in building number 3 when entering and leaving the plant. Once inside the plant area the workers could freely enter all buildings except building number 1 in which the television sets were manufactured.
18. The fire-fighting squad consisted of 18 firemen. The plant was equipped with fire extinguishers. There was no pump truck and if necessary the firemen connected water pumps to the underground water system.

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Plant Layout

19. Refer to Figure 1, page 8  sketch of the plant layout identifies numerical designations: 50X1-HUM

1. This fireproof building was approximately 35-40 x 12-15 meters in area dimension. It was four stories high, of brick construction with a flat skylight roof, and had no basement. There were three entrances to the building located at the south side of the structure. On the first floor were heavy machinery (lathes) which were utilized in the machining of the different parts used in the building's production.  50X1-HUM

on the first floor complete television chassis were manufactured. On the second floor television screens were produced and on the third floor the tubes for television sets were manufactured. On the fourth floor the television sets were assembled. Unauthorized personnel were not admitted to this floor, not because it was a secret shop, but to eliminate the presence of curious onlookers.

2. This three-story, brick building was approximately 25 x 15 meters in area dimension. It was the plant office building and had three entrances. The hipped roof with a 60 degree inclination was made of corrugated tile.
3. This was a one-story brick fireproof building approximately six by five meters in area dimension with a flat roof. The two entrance doors were used by the workers when entering and leaving the plant area. Inside the building was space for a guard, card index files of plant passes, and a telephone.
4. This brick building was approximately 40 x 15 meters in area dimension, and had a hipped roof which sloped at approximately a 60 degree angle. When the town was under Polish control, this building had been a school. Later it was converted into the first plant building. In this building the complete manufacture of ordinary light bulbs took place. The machinery in this building were of German and Hungarian make and were all in excellent working condition.  the production of this building was exported to the Satellite countries and principally to China. This shop worked on two shifts with approximately 300 workers on each shift.  75 percent of the workers in this building were women. Total production of this building was approximately 150,000 bulbs with a permitted rejection rate of three-four percent.<sup>1</sup> 50X1-HUM
5. This one-story brick, fireproof building with a flat skylight roof, was approximately 30 x 15 x 10 meters in dimension. There were three entrance doors. This building contained a 50-ton capacity glass melting oven. This

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gas oven constructed of large earthen fireproof blocks operated at a pressure of approximately five atmospheres. Also in this building glass tubes were manufactured which were used in the light bulbs. The machinery was [redacted] in excellent condition. No other details were known. This shop worked in three shifts employing a total of 150 workers (approximately 50 percent women). The production rate was approximately nine tons of glass in various forms, which were sent to the other buildings where needed. The rejection rate was approximately four percent.\*

6. This two-story brick fireproof building had a hipped roof which sloped at approximately a 60 degree angle. This building contained an oven smaller than the one described in No. 5 above. Glass tubes were also manufactured in this building but they were smaller than those produced in building number 5. Approximately 100 persons worked in this shop and the production was sent to other plant shops which were engaged in the manufacture of light bulbs.

7. This was a one-story brick fireproof building approximately 25 x 10 meters in area dimension with a flat, skylight roof. There were two entrance doors. This building contained small machinery [redacted] used in the mass production of radio and television tubes.

[redacted] The shop production was sent to building number 4 where it was incorporated in the manufacture of tube and bulb filaments. Approximately 100 persons worked in this building, 75 percent of whom were women.\*

8. This was a three-story brick fireproof building with a flat skylight roof. This building which had two entrance doors, was approximately 20 x 30 meters in area dimension. On the first floor were the storage areas for plant production. On the second floor there were two 120 metric ton ovens. On the third floor were two large automatic Hungarian-make machines which manufactured 25,000 light bulb shells in eight hours. [redacted]

[redacted] they were in excellent working condition. Approximately 400 persons worked in this installation in three shifts.\*

9. This one-story brick building with a flat skylight roof, and two entrance doors, contained a forge shop for repairing plant machinery. Approximately 50 persons worked in this building in two shifts.

\*Buildings number 5, 7 and 8 each had a cylindrical smokestack approximately 80 meters high. The diameter at the base was approximately three meters and the smokestack tapered slightly toward the top.

Refer to lettered entrance gates which are described as follows:

A. Truck entrance gate. This gate had two wooden doors opening in the center and trucks destined for point No. 1 entered through this gate.

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- B. This gate was the same as above and was the entrance preferred by the director and administrative personnel of the plant.
- C. This gate had only one door which was very strong. This gate was used for entering and leaving the building designated as point 2.
- D. This gate which had only one wooden door, was used by the workers who then passed through point No. 3 into the plant territory.
- E. Also this gate only had one wooden door as "D". However this gate was only used as an exit by the workers after having passed through point No. 3.
- F. This gate had two wooden doors opening in the center but constructed in the form of a fence. This gate was used by trucks hauling materials in and out of the plant and by trucks hauling out plant production.

Comment:

50X1-HUM

1. It could not be determined whether or not this production figure represented daily, weekly or monthly shop output.

50X1-HUM

~~C-O-N-F-I-D-E-N-T-I-A-L~~



C-O-N-F-I-D-E-N-T-I-A-L

50X1-HUM

-8-

ad

TURGENEVA STREET

SEVERINA STREET

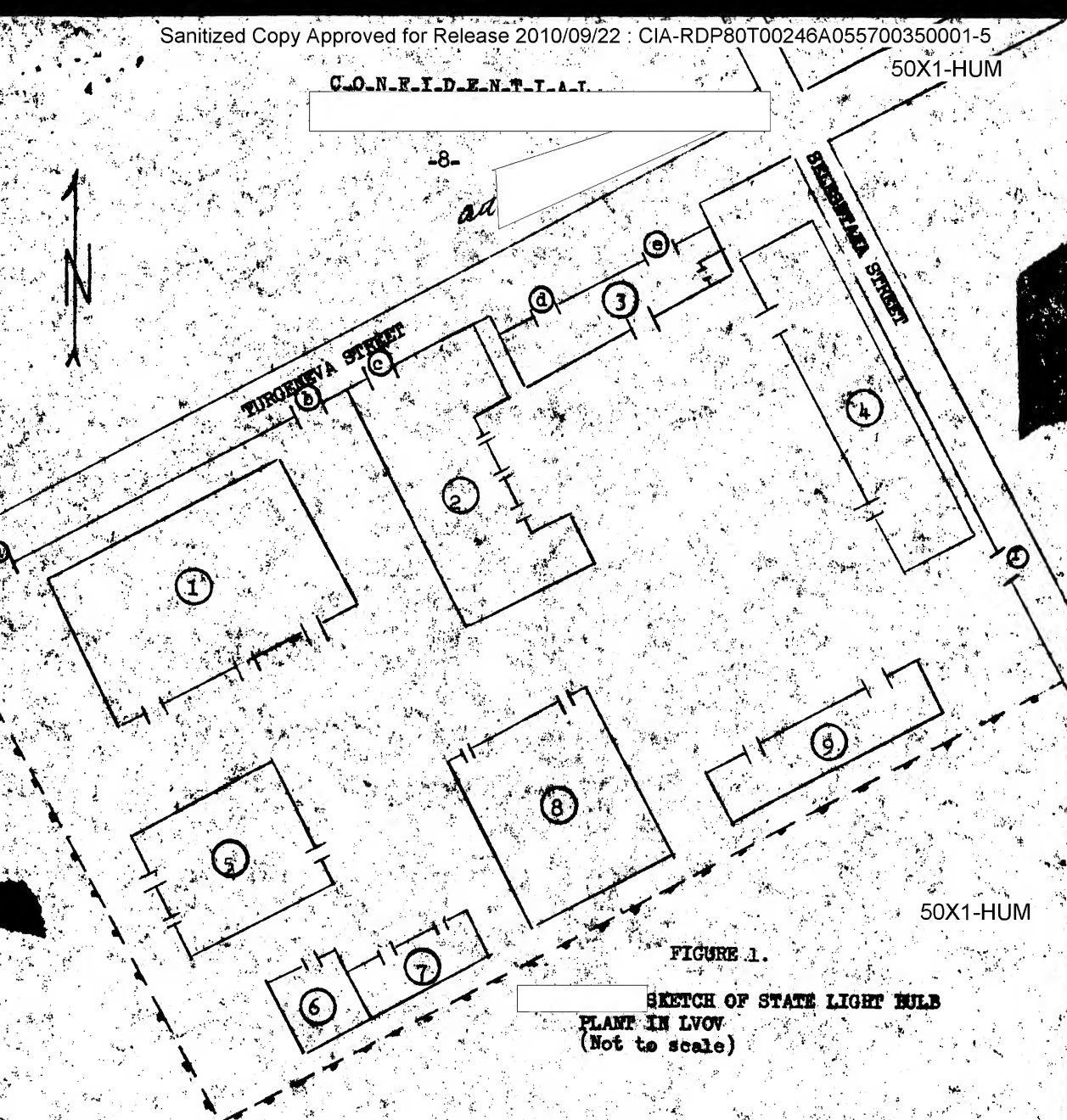


FIGURE 1.

SKETCH OF STATE LIGHT BULB  
PLANT IN LVOV  
(Not to scale)

50X1-HUM

50X1-HUM

50X1-HUM

50X1-HUM

C-O-N-F-I-D-E-N-T-I-A-L

**INFORMATION REPORT INFORMATION REPORT****CENTRAL INTELLIGENCE AGENCY**

This material contains information affecting the National Defense of the United States within the meaning of the Espionage Laws, Title 18, U.S.C. Secs. 793 and 794, the transmission or revelation of which in any manner to an unauthorized person is prohibited b50X1-HUM

~~C-O-N-F-I-D-E-N-T-I-A-L~~

COUNTRY USSR (Kharkov oblast)

REPORT NO. ,

SUBJECT Izyum Optical Plant

DATE DISTR.

NO. PAGES

4

REFERENCES

RD

DATE OF  
INFO.  
PLACE &  
DATE ACQ.

50X1-HUM

50X1-HUM

SOURCE EVALUATIONS ARE DEFINITIVE. APPRAISAL OF CONTENT IS TENTATIVE.

50X1-HUM

~~C-O-N-F-I-D-E-N-T-I-A-L~~

at

C-O-N-F-I-D-E-N-T-I-A-L

50X1-HUM

-2-

## IZYUM OPTICAL PLANT

50X1-HUM

1. Shop No. 16, the only restricted shop at the Izyum Optical Plant, produced very small lenses for use by ophthalmologists, assembled goggles for use by aviators, and applied black enamel to MK-11 prisms (see paragraph 2 below).<sup>1</sup> A guard was always stationed at the entrance to this shop, entry to which necessitated a propusk [redacted] which contained the bearer's photograph, full name, and a countersign consisting of a triangle formed by three very small five-pointed stars. [redacted] 50X1-HUM
- shop No. 16 and No. 14, [redacted] made molds of different types for the manufacture of glasses. Next to shop No. 16 was the office of the voyenpred, an officer of unspecified rank who wore a green uniform with yellow pogoni on which were an undetermined number of yellow stars. In summer 1954, this officer was assigned full-time to a naval commission from Leningrad which paid a two-week visit to the plant, visiting shop No. 16 principally. The commission was composed of sailors headed by a captain [redacted] 50X1-HUM
2. The MK-11 prisms, whose manufacture began about 1952, were produced in rough in shop No. 1, from where they were sent to shop No. 15 for precision finishing and polishing, and then to shop No. 16 to be enameled on all faces except the oblique face (see Figure 1 on page 4), which had a mirrored surface. The prisms were approximately 12 centimeters long, seven centimeters wide, and four centimeters high. [redacted] 50X1-HUM
- [redacted] glass was tested in a laboratory next to shop No. 14 before the manufacturing process was begun. It was said at the plant that these prisms were for use in tanks. About 25 or 30 were produced daily.
3. About 1953, the manufacture of orange-colored glass objects known as katofoty, was begun in shop No. 15. [redacted] 50X1-HUM
- [redacted] they were for use in submarines. The objects were prism-shaped and were not perforated in the center. [redacted] 50X1-HUM
- [redacted] they had more than eight sides. [redacted]
- [redacted] they tended to break during polishing. which was done with felt on a machine especially adapted for the polishing operation. [redacted] 50X1-HUM
- [redacted] they were made by hand and there were very few.

C-O-N-F-I-D-E-N-T-I-A-L

50X1-HUM

50X1-HUM

C-O-N-F-I-D-E-N-T-I-A-L

50X1-HUM

-3-

aa

4. Shop No. 16 was located on the fourth floor of the plant. 50X1-HUM  
Ordinary glasses and aviators' goggles were assembled here  
and this shop worked on prisms said to be for use in tanks.  
This shop also received different sizes of camera lenses which  
had been made in other shops. [redacted]  
[redacted] No. 14 [redacted] produced molds of  
different sizes for the manufacture of glasses.
5. [redacted] approximate measurements of the M-11<sup>1</sup> prisms 50X1-HUM  
[redacted] 12 centimeters long, nine centimeters wide, and 2.5  
centimeters high, and [redacted] about 50 were produced  
daily. They were made in shop No. 1, sent to shop No. 15 for  
polishing and finishing to size, and after being painted 50X1-HUM  
black except on the parts indicated on Figure No. 2 on page 4,  
were sent to shop No. 16. [redacted]  
[redacted]
6. About 1954, manufacture of prisms with about 20 faces, called  
katofoty, was begun in shop No. 15. Some were red; a greater  
number were orange. They were perforated and were made by  
hand. They were very expensive to produce because of the many  
faces and because they were hand-polished and the daily pro-  
duction was very small. Only one person worked on them on 50X1-HUM  
the morning shift for which reason [redacted] no more  
than two were produced daily. [redacted]  
[redacted] these prisms were used for something related to 50X1-HUM  
ships [redacted] 50X1-HUM
7. [redacted] the voyenpred [redacted] wearing a green uniform with  
red pogoni and three or four five-pointed yellow stars, and a  
green garrison cap with red stripe. Another person, who [redacted]  
[redacted] was the voyenpred's assistant, wore the same 50X1-HUM  
uniform except for two stars on the pogoni. 50X1-HUM
8. [redacted] 50X1-HUM  
[redacted] several pro-  
ducts were sent to Krasnogorsk, Dnepropetrovsk, and abroad.  
[redacted]
9. [redacted] there were frequent exchange visits  
between engineers and technicians of the Izyum and Krasnogorsk  
optical plants. [redacted] 50X1-HUM  
[redacted]  
[redacted]

1. [redacted] Comment: Previous reports have listed this lens  
as the M-11. [redacted]

50X1-HUM

C-O-N-F-I-D-E-N-T-I-A-L

50X1-HUM

att.

50X1-HUM

Prism

50X1-HUM

Prism

C-O-N-F-I-D-E-N-T-I-A-L

50X1-HUM